

ESSC (Enterprise Systems Services Center) Project

Status and Plans

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Topics

- Design Status
- Site selection status
- Schedule
- Budget



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ESSC Design Status

- Preliminary Design
 - Helena site – replace Mitchell Bldg data/network center
 - 15,000 gross sf; 4,500-5,000 sqf raised floor
 - “Eastern MT” site – peer site for critical workload; in a different seismic risk zone
 - 8,000 gross sf; ~2,000 sqf raised floor
- Size based on “current” equipment inventory and agency updates
 - Based on optimal rack configurations
 - Open floor – no cages
- Noteworthy: several agencies interested in Eastern MT ESSC for D/R support



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Design Status (cont.)

- Key characteristics
 - “N+1” capacity/redundancy for electrical & power infrastructure (“2N” if budget allows)
 - Both sites to have most Tier III characteristics
 - Together they approach Tier IV
 - “Non stop” processing for critical workload
 - Critical data mirrored between sites
 - Automated failover during an incident
 - Operations Center in Helena, minimal staff in East site
 - Modular expansion capabilities
- Moving into the “Schematic” phase for detail design and construction documents

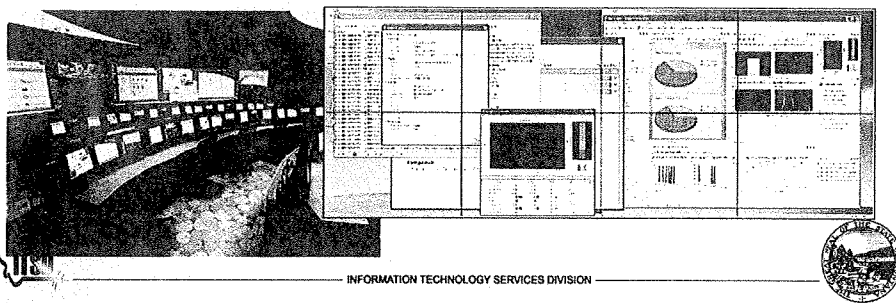


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Misc. Items of Interest

- Restricted access – considering biometric security
- 24" Raised floor
- 150 watts/sf power (at start up)
- Cooling options being considered, including passive, "free" cooling
- Operations Center – critical to Service Management
 - Integrate monitoring/incident mgmt/problem mgmt/change mgmt



ITSD Data Center Relocation Plan

- Large, complex project that parallels the construction effort & **costly!**
- "Stage 1" planning process underway using TSS relocation specialists
 - Four (or so) weekend moves over 3-4 months
 - Campus fiber extended to new site
 - Move ITSD infrastructure and "let it age"
 - Move ITSD proprietary and "let it age"
 - Move ITSD hosted equipment (agency)
- Current approach is to move to Helena ESSC first
 - Uses equipment budget better
 - Equipment for East ESSC becomes "swing" equipment for Helena ESSC
 - Allows us to phase in real-time mirroring/failover with east site



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- Agreement with MDT management
 - Site compatible with MDT future plans
 - Proximity to existing buildings
 - Minimize site development costs (roads, parking)
 - Potential to recover waste heat for buildings
- MOU being developed
 - Acquisition of land
 - Ongoing operational relationship



OPTION A
WEST SITE PLAN

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Three Eastern Site Candidates

- Miles City
 - Pine Hills property
 - “No cost”
- Billings
 - West end “TransTech Center” or adjacent
 - Purchase required (~\$10/sf)
 - Billings Heights site not viable
- Forsyth
 - Part of former Air Force site now owned by the city
 - Deed restrictions complicate



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Site Assessment Categories

- Property characteristics (general)
- Security/disaster risk characteristics
- Infrastructure available (power & fiber)
- Economic development potential
- Differences in one-time cost (HB4 funded)
 - Land acquisition and fiber installation costs
- Differences in ongoing cost (not funded)
 - Recurring telecommunications costs



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Selection Process

- Site assessment tool
- Public comment through January 18.
 - Written comments
 - Email comments
 - Local public comment meeting (3 communities)
 - Summary of public comments from all sources
- Decision
 - Assessment/comments/other considerations
 - March 4 press release
 - March 6 review with LFC



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Site Assessment Summary (Final Version)

POINTS SUMMARY	Maximum Possible Points	Miles City	Billings - TransTech	Billings - Heights	Forsyth
Real Property	5,000	4,375	4,462	3,385	3,769
Security	20,000	13,403	12,078	8,052	11,584
Infrastructure	12,500	11,071	11,929	7,231	10,321
Economic Development	12,500	7,500	2,500	2,500	7,500
Capital Cost Comparison	20,000	20,000	0	20,000	20,000
Recurring Cost Comparison	30,000	10,000	30,000	30,000	10,000
TOTAL	100,000	66,349	60,968	71,203	63,175

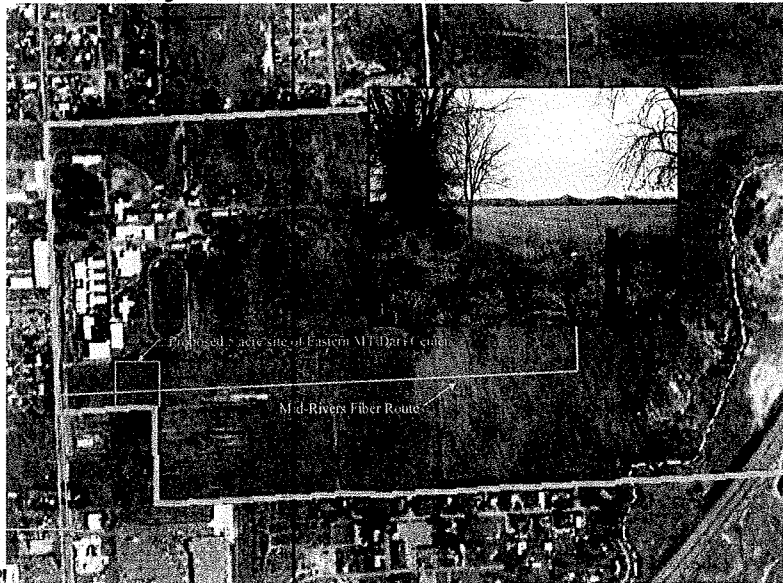
Based on 100,000 possible points.



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In case you were wondering



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ESSC Implementation Approach

- Helena facility (preliminary plan)
 - Move ITSD infrastructure and proprietary
 - Move ITSD hosted equipment (agency)
 - Move MDT
 - “Let it age”
 - Several organizations have expressed interest
 - Anticipate adding additional load mid-2010
 - Multiple services offered
 - ITSD Hosting – current offering
 - Agency Hardware Hosting – current offering
 - Custom Secured Area Hosting – considering
 - Very inefficient use of floor space – expensive!



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ESSC Implementation Approach

- Eastern MT facility
 - Design objective to support peer site redundancy for critical systems' data and servers
 - "Walk before we run"
 - A couple of steps before we are "bet your business" solid on data mirroring and failover technologies
 - Defers equipment/software investment (budget factor)
 - Several organizations have expressed interest using it as a DR site.
 - No service established yet ... nature of backup, archiving approach, communications cost, etc
 - ITSD will be considering what services to be offered
 - ITSD Hosting – current offering
 - Agency Hardware Hosting – current offering
 - Custom Secured Area Hosting - considering



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ESSC Major Activities & Current Targets

- Requirements definition and conceptual design: Mar '08
- Detail design & construction documents/bid
 - Eastern site: July '08
 - Helena site: July '08
- Contract/break ground
 - Eastern site: September '08
 - Helena site: September '08
- Construction time estimate
 - Eastern site: 9-12 months
 - Helena site: 12-16 months



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Budget Considerations

- Appropriation of \$14.5 million
 - \$9.65 million reduction from request (office building portion)
- Data center construction costs have skyrocketed in last 2-3 years
 - Tremendous demand (~ 80% of existing data centers' space/cooling/power at capacity)
 - Key components (esp. electrical) have seen tremendous price increases
- Initial designs have been trimmed to fit within the appropriation without sacrificing key features.
- Alternative funding being sought for relocation of Mitchell Building data center to ESSC



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General Discussion



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